1-13. (Cancelled)

14. (Currently Amended) A method for anastomosing a first hollow tissue structure to a second hollow tissue structure having an aperture, the method comprising the steps of:

providing an anastomosis device having a longitudinal axis and a plurality of openings, and a plurality of tissue securing elements each having a first end and a second end, the tissue securing elements comprised of a material capable of being biased from an unbiased configuration to a biased configuration, each separate tissue securing element being configured to be at least partially disposed within a separate one of the plurality of openings;

holding the plurality of tissue securing elements in the biased configuration in the plurality of openings;

inserting at least the first ends of the plurality of tissue securing elements through the aperture in the second hollow tissue structure while the plurality of tissue securing elements are in the biased configuration;

ejecting at least a portion of each of the tissue securing elements from the plurality of openings by applying a force along the longitudinal axis to the respective second ends of each of the plurality of tissue securing elements; and

permitting the plurality of tissue securing elements to move from the biased configuration to the unbiased configuration, whereat each first end of each tissue securing element contacts the inner surface of the second hollow tissue structure and each second end of each tissue securing element contacts the outer surface of the second hollow tissue structure.

15. (Previously Presented) The method of claim 14, wherein the first ends of the tissue securing elements do not pierce the inner wall of the second hollow tissue structure when the tissue securing elements are in the unbiased configuration.

16. (Previously Presented) The method of claim 14, wherein the first ends of the tissue securing elements are permitted to assume the unbiased configuration prior to the second ends of the tissue securing elements being permitted to assume the unbiased configuration.

17. (Previously Presented) The method of claim 14, wherein the first hollow tissue structure is a vascular conduit and the second hollow tissue structure is an aorta.

18. (Previously Presented) The method of claim 14, wherein the anastomosis device comprises a hub having a plurality of openings, each of the openings sized to receive a portion of a separate tissue securing element and comprising the step of passing the second ends of the tissue securing elements through the first hollow tissue structure and through the plurality of openings of the hub.

19. (Previously Presented) The method of claim 14, wherein the permitting step is performed such that the first ends and the second ends of the tissue securing elements compress a portion of the end of a first hollow tissue structure and a portion of the second hollow tissue structure adjacent to the aperture between the first ends and the second ends.

20. (Previously Presented) The method of claim 14, comprising everting the end of the first hollow tissue structure.

21. (Previously Presented) The method of claim 20, wherein the everting step is performed prior to the inserting step.

22. (Previously Presented) The method of claim 20, wherein the everting step comprises everting the end of the hollow tissue structure approximately 90 degrees.

23. (Previously Presented) The method of claim 20, wherein the everting step comprises everting the end of the hollow tissue structure less than 90 degrees.

24. (Previously Presented) The method of claim 20, wherein the everting step comprises everting the end of the hollow tissue structure greater than 90 degrees.

25. (Previously Presented) The method of claim 20, wherein the permitting step is performed such that the first ends and the second ends of the tissue securing elements compress a portion of the everted end of the first hollow tissue structure and a portion of the second hollow tissue structure adjacent to the aperture between the first ends and the second ends.

26. (Previously Presented) The method of claim 25, wherein the permitting step comprises compressing the inner surface of the portion of the everted end of the first hollow tissue against the outer surface of the second hollow tissue structure.

27. (Previously Presented) The method of claim 20, wherein the inserting step comprises inserting the first ends of the tissue securing elements from an exterior surface of the first hollow tissue structure toward an interior surface of the first hollow tissue structure.

28. (Previously Presented) The method of claim 27, wherein the anastomosis device comprises a hub having a bore sized to receive a portion of the first hollow tissue structure, and comprising the step of passing the first hollow tissue structure through the bore.

29. (Previously Presented) The method of claim 28, wherein the step of permitting the tissue securing elements to move from the biased configuration to the unbiased configuration causes the first ends and the second ends of the tissue securing elements to compress the portion of the

end of a first hollow tissue structure, the hub and the portion of the second hollow tissue structure adjacent to the aperture.

30. (Currently Amended) A method for anastomosing a first hollow tissue structure to a second hollow tissue structure having an aperture, the method comprising the steps of:

providing an anastomosis device having a longitudinal axis and a plurality of openings, and a plurality of tissue securing elements each having a first end and a second end, at least a portion of the tissue securing elements comprised of a material capable of being biased from an unbiased configuration to a biased configuration, wherein each one of the tissue securing elements configured to be at least partially disposed within at least one opening of the plurality of openings;

holding at least a portion of each of the plurality of tissue securing elements in the biased configuration in the at least one opening;

inserting at least the first ends of the plurality of tissue securing elements through an aperture in a second hollow tissue structure while the at least a portion of each of the plurality of tissue securing elements is in the biased configuration;

ejecting at least a portion of each of the tissue securing elements from the plurality of openings by applying a force along the longitudinal axis to the respective second ends of each of the tissue securing elements; and

permitting the at least a portion of each of the tissue securing elements to move from the biased configuration to the unbiased configuration, whereat each first end of each tissue securing element contacts the inner surface of the second hollow tissue structure and each second end of each tissue securing element contacts the outer surface of the second hollow tissue structure.

31-35 (Cancelled)

36. (Previously Presented) The method of claim 14, wherein the anastomosis device comprises a body.

37. (Previously Presented) The method of claim 36, wherein the body has a distal end and comprises a plurality of barbs at its distal end for engaging the first hollow tissue structure.

38. (Previously Presented) The method of claim 36, wherein the body is a sleeve.

39. (Previously Presented) The method of claim 36, wherein the body has a plurality of slots and each of the plurality of slots communicates with a separate opening of the plurality of openings.

40. (Previously Presented) The method of claim 39, wherein the anastomosis device comprises at least one plunger slidably disposed within at least one of the plurality of slots, and comprising the step of moving the at least one plunger within the at least one of the plurality of slots to displace at least one tissue securing element from a first position, whereat at least a portion of the at least one tissue securing element is within the at least one of the plurality of slots, to a second position, whereat at least a portion of the at least one tissue securing element is outside the at least one of the plurality of slots.

41. (Previously Presented) The method of claim 40, wherein the plurality of tissue securing elements are disposed about a perimeter of the first hollow tissue structure and outside the lumen of the first hollow tissue structure, and comprising the step of everting the first hollow tissue structure.

42. (Previously Presented) The method of claim 41, comprising the step of passing at least a portion of each of the plurality of tissue securing elements through the everted first hollow tissue structure.

43. (Previously Presented) The method of claim 42, comprising the step of withdrawing the anastomosis device from the first hollow tissue structure.

44. (Previously Presented) The method of claim 43, comprising the step of, prior to the withdrawing step, moving at least one plunger through at least one of the plurality of slots to move at least a portion of each tissue securing element out of its respective opening.

45. (Currently Amended) A method for anastomosing a first hollow tissue structure to a second hollow tissue structure having an aperture, the method comprising the steps of:

providing an anastomosis device having a longitudinal axis and at least one opening, and at least one tissue securing element having a first end and a second end, the tissue securing element comprised of a material capable of being biased from an unbiased configuration to a biased configuration, the tissue securing element configured to be at least partially disposed within the at least one opening;

everting the end of the first hollow tissue structure;

holding the at least one tissue securing element in the biased configuration in the at least one opening;

inserting at least the first end of the at least one tissue securing element through the aperture in the second hollow tissue structure while the tissue securing element is in the biased configuration;

ejecting at least a portion of the at least one tissue securing element from the at least one opening by applying a force along the longitudinal axis to the second end of the at least one tissue securing element; and

permitting the tissue securing element to move from the biased configuration to the unbiased configuration, whereat at least the first end of the at least one tissue securing element contacts the inner surface of the second hollow tissue structure and at least the second end of the at least one tissue securing element contacts the outer surface of the second hollow tissue structure.

46. (Previously Presented) The method of claim 45, wherein the everting step is performed prior to the inserting step.

47. (Previously Presented) The method of claim 45, wherein the everting step comprises everting the end of the hollow tissue structure approximately 90 degrees.

48. (Previously Presented) The method of claim 45, wherein the everting step comprises everting the end of the hollow tissue structure less than 90 degrees.

49. (Previously Presented) The method of claim 45, wherein the everting step comprises everting the end of the hollow tissue structure greater than 90 degrees.

50. (Currently Amended) A method for anastomosing a first hollow tissue structure to a second hollow tissue structure having an aperture, the method comprising the steps of:

providing an anastomosis device having a longitudinal axis and at least one opening, and at least one tissue securing element having a first end and a second end, at least a portion of the tissue securing element comprised of a material capable of being biased from an unbiased configuration to a biased configuration, the tissue securing element configured to be at least partially disposed within the at least one opening;

everting the end of the first hollow tissue structure;

holding at least a portion of the at least one tissue securing element in the biased configuration in the at least one opening;

inserting at least the first end of the at least one tissue securing element through an aperture in a second hollow tissue structure while the at least a portion of the tissue securing element is in the biased configuration;

ejecting at least a portion of the at least one tissue securing element from the at least one opening by applying a force along the longitudinal axis to the second end of the at least one tissue securing element; and

permitting the at least a portion of the tissue securing element to move from the biased configuration to the unbiased configuration, whereat at least the first end of the at least one tissue securing element contacts the inner surface of the second hollow tissue structure and at least the second end of the at least one tissue securing element contacts the outer surface of the second hollow tissue structure.

51. (Previously Presented) The method of claim 50, wherein the everting step is performed prior to the inserting step.

52. (Previously Presented) The method of claim 50, wherein the everting step comprises everting the end of the hollow tissue structure approximately 90 degrees.

53. (Previously Presented) The method of claim 50, wherein the everting step comprises everting the end of the hollow tissue structure less than 90 degrees.

54. (Previously Presented) The method of claim 50, wherein the everting step comprises everting the end of the hollow tissue structure greater than 90 degrees.

55. (Currently Amended) A method for anastomosing a first hollow tissue structure to a second hollow tissue structure having an aperture, the method comprising the steps of:

providing a plurality of tissue securing elements each having a first end and a second end, at least a portion of the tissue securing elements comprised of a material capable of being biased from an unbiased configuration to a biased configuration, and an anastomosis device having a longitudinal axis and a plurality of openings, each opening configured to accept at least one of the first end or the second end of a separate tissue securing element;

holding at least one end of each of the plurality of tissue securing elements in the biased configuration in a separate one of the plurality of openings;

inserting at least the first ends of the plurality of tissue securing elements through an aperture in a second hollow tissue structure with at least a portion of each of the plurality of tissue securing elements being in the biased configuration;

ejecting the at one least end of each of the plurality of tissue securing elements from the plurality of openings by applying a force along the longitudinal axis to the respective second ends of each of the plurality of tissue securing elements; and

permitting the at least a portion of each of the tissue securing elements to move from the biased configuration to the unbiased configuration, whereat each first end of each tissue securing element contacts the inner surface of the second hollow tissue structure and each second end of each tissue securing element contacts the outer surface of the second hollow tissue structure.

56. (Previously Presented) The method of claim 55, wherein the holding step comprises holding each of the second ends of the tissue securing elements in a separate one of the plurality of openings.

57. (Previously Presented) The method of claim 55, wherein the first ends and the second ends of the tissue securing elements compress a portion of the end of a first hollow tissue structure and a portion of the second hollow tissue structure.

58. (Currently Amended) A method for anastomosing a first hollow tissue structure to a second hollow tissue structure having an aperture, the method comprising the steps of:

providing a plurality of tissue securing elements each having a first end and a second end, at least a portion of the tissue securing elements comprised of a material capable of being biased from an unbiased configuration to a biased configuration, and

an anastomosis device having a longitudinal axis and a distal end, the anastomosis device comprising a means for holding one of the first ends and second ends of the plurality of tissue securing elements about a perimeter of the distal end of the anastomosis device, the holding means configured to hold at least a portion of each of the plurality of tissue securing elements in the biased position;

holding at least a portion of each of the plurality of tissue securing elements in the biased configuration in the holding means;

inserting the distal end of the anastomosis device through an aperture in a second hollow tissue structure while each of the plurality of tissue securing elements is in the biased configuration;

ejecting at least a portion of each of the plurality of tissue securing elements from the holding means by applying a force along the longitudinal axis to the respective second ends of each of the plurality of tissue securing elements; and

permitting each of the plurality of tissue securing elements to move from the biased configuration to the unbiased configuration, whereat each first end of each tissue securing element contacts the inner surface of the second hollow tissue structure and each second end of each tissue securing element contacts the outer surface of the second hollow tissue structure.

59. (Previously Presented) The method of claim 58, comprising the step of moving the plurality of tissue securing elements relative to the holding means such that the tissue securing elements are permitted to move from the biased configuration to the unbiased configuration.

60. (Previously Presented) The method of claim 58, wherein the holding means is configured to hold the plurality of tissue securing elements in the biased configuration with at least a portion of the tissue securing elements passed through an end of the first hollow tissue structure.

61. (Previously Presented) The method of claim 15, wherein the first ends of the tissue securing elements do not penetrate through the inner wall of the second hollow tissue structure when the tissue securing elements are in the unbiased configuration.

62. (Previously Presented) The method of claim 14, wherein the holding step comprises disposing at least a portion of each of the plurality of tissue securing elements in the plurality of openings.

63. (Previously Presented) The method of claim 14, wherein the anastomosis device has a bore and the plurality of openings communicate with one another via the bore.

64. (Previously Presented) The method of claim 30, wherein the holding step comprises disposing at least a portion of each of the plurality of tissue securing elements in the plurality of openings.

65. (Previously Presented) The method of claim 30, wherein the anastomosis device has a bore and the plurality of openings communicate with one another via the bore.

66. (Previously Presented) The method of claim 45, wherein the holding step comprises disposing at least a portion of each of the plurality of tissue securing elements in the plurality of openings.

67. (Previously Presented) The method of claim 45, wherein the anastomosis device has a bore and the plurality of openings communicate with one another via the bore.

68. (Previously Presented) The method of claim 50, wherein the holding step comprises disposing at least a portion of each of the plurality of tissue securing elements in the plurality of openings.

69. (Previously Presented) The method of claim 50, wherein the anastomosis device has a bore and the plurality of openings communicate with one another via the bore.

70. (Previously Presented) The method of claim 55, wherein the holding step comprises disposing at least a portion of each of the plurality of tissue securing elements in the plurality of openings.

71. (Previously Presented) The method of claim 55, wherein the anastomosis device has a bore and the plurality of openings communicate with one another via the bore.

72. (Previously Presented) The method of claim 58, wherein the holding means comprises a plurality of openings and the holding step comprises disposing at least a portion of each of the plurality of tissue securing elements in the plurality of openings.